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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,089	09/12/2003	Terry W. Glass	63032	8864

109 7590 07/25/2007  
THE DOW CHEMICAL COMPANY  
INTELLECTUAL PROPERTY SECTION, P. O. BOX 1967  
MIDLAND, MI 48641-1967

EXAMINER
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FEELY, MICHAEL J

ART UNIT	PAPER NUMBER
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1712

MAIL DATE	DELIVERY MODE
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07/25/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/662,089	GLASS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael J. Feely	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-17 is/are pending in the application.
- 4a) Of the above claim(s) 6-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 13-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                     |                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                         | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Pending Claims***

Claims 1 and 3-17 are pending.

Claims 6-12 have been withdrawn from consideration.

### ***Response to Amendment***

1. The objection to claims 1, 3-5, 13, and 17 has been overcome by amendment.

### ***Claim Rejections - 35 USC § 112, 2<sup>nd</sup> paragraph***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 3-5, and 13-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

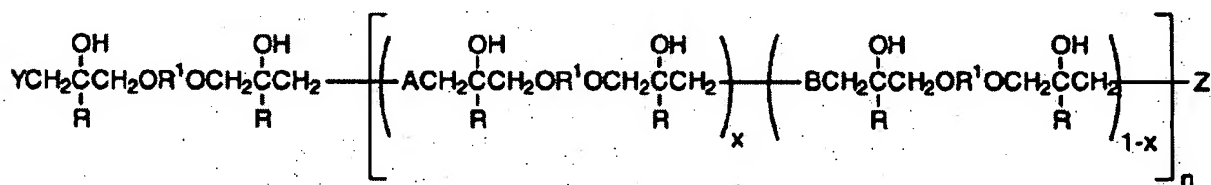
The claims fail to define "q".

### ***Claim Rejections - 35 USC § 102/103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1, 3-5, and 13-17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Silvis et al. (US Pat. No. 5,464,924).

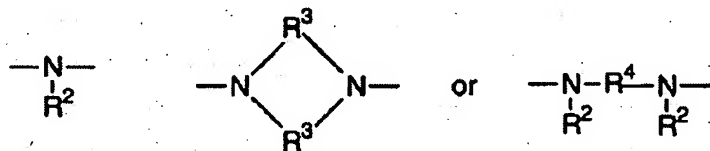
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Regarding claims 1, 3-5, and 13, Silvis et al. disclose: (1) a copolyhydroxyaminoether having side chains of polyalkylene oxides (column 1, line 26 through column 2, line 45; column 2, line 51 through column 5, line 27) represented by the following formula:



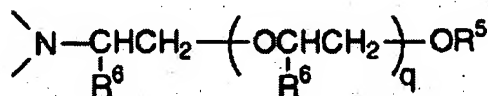
wherein R is hydrogen or C<sub>1</sub>-C<sub>20</sub> alkyl (column 1, lines 50-51); R<sup>1</sup> is individually an aromatic or substituted aromatic moiety (column 2, lines 9-11); Y is an organic moiety that does not contain an epoxy group and Z is an organic moiety, optionally containing an epoxy group (column 3, lines 14-15); and n is 5-400 (column 2, line 11);

each A is individually an amino group represented by one of the formulas:



wherein R<sup>2</sup> is hydrocarbyl or substituted hydrocarbyl; R<sup>3</sup> is C<sub>2</sub>C<sub>10</sub> hydrocarbylene or substituted hydrocarbylene; R<sup>4</sup> is C<sub>2</sub>-C<sub>20</sub> hydrocarbylene or substituted hydrocarbylene, wherein the substituent(s) is hydroxyl, cyano, halo, arlyloxy, alkylamido, arylamido, alkylcarbonyl, or arylcarbonyl (column 1, line 40 through column 2, line 1); and

each B is represented by the formula:



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wherein R<sup>5</sup> is hydrocarbyl; each R<sup>6</sup> is individually hydrogen, methyl, ethyl, hydrocarbyl or combinations thereof (column 2, lines 2-13); and *x is greater than 0.8* (column 2, lines 12-13 and 65);

(3) wherein R is hydrogen (column 1, lines 50-51); each R<sup>1</sup> is individually *see claim for list* (column 1, line 65 through column 3, line 4); each R<sup>2</sup> is individually *see claim for list* (column 1, line 40 through column 2, line 1); R<sup>3</sup> and R<sup>4</sup> are individually *see claim for list* (column 1, line 40 through column 2, line 1); R<sup>5</sup> is C<sub>1</sub>-C<sub>20</sub> alkyl (column 2, lines 2-13); R<sup>6</sup> is a mixture of hydrogen and methyl (column 1, line 40 through column 2, line 13); each of Y and Z are individually bis(2-hydroxyethyl)amino or N-(2-hydroxyethyl)piperazinyl (column 3, lines 32-54); q is 20-50 (column 2, line 11); and n is 10-25 (column 2, line 11); (4) wherein R<sup>1</sup> is isopropylidenediphenylene (column 1, line 65 through column 3, line 4) and R<sup>2</sup> is 2-hydroxyethyl (column 1, line 40 through column 2, line 1); (5) wherein each R<sup>5</sup> is individually hydrogen, methyl, ethyl, propyl, butyl, benzyl or combinations thereof (column 2, lines 2-13); and Y and Z are bis(2-hydroxyethyl)amino (column 3, lines 32-54); and

(13) a composition comprising an aqueous fluid and the polymer of claim 1 (column 6, lines 3-12: *washing with water*).

It should be noted that the instantly claimed “x” range of “greater than 0.8” is embraced by the prior art’s preferred range of “from about 0.3 to about 0.8”. The endpoint of “about 0.8” includes values just above 0.8.

The teachings of Silvis et al. are deficient because: they do not explicitly disclose that the polymer is water-soluble. However, it appears that the polymers of Silvis et al. would have been inherently water-soluble. It has been found that, “Products of identical chemical composition

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can not have mutually exclusive properties.” A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present – *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Therefore, it appears that the teachings of Silvis et al. would have inherently or obviously satisfied the instantly claimed *water-soluble* polymer because they satisfy all of the material/chemical limitation of the instant invention. In light of this, a chemical composition and its properties are inseparable.

Regarding claim 17, Silvis et al. disclose a process which comprises combining water and the polymer of claim 1, wherein the water *optionally* contains acids, bases, salts, solvents, or mixtures thereof (column 6, lines 3-12). They do not explicitly state that the polymer is dissolved in water. However, it appears that this would have inherently taken place to some degree because the polymer of the prior art satisfies all of the material/chemical limitations of the instant invention.

Therefore, it appears that the prior art polymer would have inherently dissolved, to some degree, in the prior art water-wash or water/methanol (*water/solvent*) medium because the prior art satisfies all or the instantly claimed material/chemical limitations and process conditions.

Regarding claims 14-16, Silvis et al. disclose: **(14 & 15)** an aqueous solution comprising a polymer represented by the formula (*see claims for structures and details*) (column 6, lines 3-12: *washing with water*). However, they fail to explicitly disclose: **(16)** wherein the viscosity increases as temperature is increased.

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It appears that this would have inherently taken place because all of the material/chemical limitations of the instant invention have been satisfied. It has been found that, "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present – *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Therefore, it appears that the teachings of Silvis et al. would have inherently or obviously satisfied the viscosity properties of the instantly claimed *aqueous solution* because they satisfy all of the material/chemical limitation of the instant invention. In light of this, a chemical composition and its properties are inseparable.

### ***Double Patenting***

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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7. Claims 1 and 3-5 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 5,464,924. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons set forth above in section 5 of this Office action.

### ***Response to Arguments***

8. Applicant's arguments filed April 23, 2007 have been fully considered but they are not persuasive.

Applicant argues that the skilled artisan would not have "at once" envisaged the instant invention when  $R^1$  is narrowly defined as an aromatic or substituted aromatic moiety and  $x$  is narrowly defined to be greater than 0.8.

With respect to the " $x$ " range, the prior art discloses a preferred range when  $x$  is from about 0.3 to about 0.8 (*see column 3, line 65*). The endpoint "about 0.8" includes values just above 0.8. Therefore, if not "at once" envisaged, it would have been obviously envisaged by the skilled artisan.

With respect to  $R^1$ , the prior art discloses: a  $C_2$ - $C_{10}$  substituted or unsubstituted alkylene and various phenylene (aromatic) groups. Preferred embodiments include isopropylidenediphenylene or methylenediphenylene (*see column 3, lines 58-59, claims 7 & 8, Example 1*). Therefore, if not "at once" envisaged, it would have been obviously envisaged by the skilled artisan.



***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

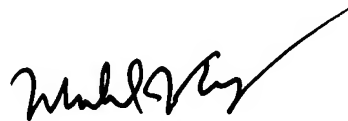
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*Communication*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael J. Feely  
Primary Examiner  
Art Unit 1712

July 20, 2007

**MICHAEL FEELY**  
**PRIMARY EXAMINER**